

AMENDMENTS TO THE CLAIMS

In the claims:

1. **(Currently Amended)** An isolated nucleic acid molecule encoding hIrelp comprising the nucleotide sequence of SEQ ID NO:1 [[Figures 8A and 8B]].
2. **(Original)** A vector comprising the nucleic acid molecule of Claim 1.
3. **(Currently Amended)** An isolated host [[A]] cell transformed with the nucleic acid molecule of Claim 1.
4. **(Original)** The cell of Claim 3, wherein the cell is a mammalian cell.
5. **(Original)** The cell of Claim 3, wherein the cell is a bacterial cell.
6. **(Withdrawn)** A protein comprising a polypeptide encoded by the nucleic acid molecule of claim 1.
7. **(Currently Amended)** An isolated [[A]] transfected cell producing the protein of Claim 6.
8. **(Withdrawn)** An antibody specific for the protein of claim 6.
9. **(Withdrawn)** The antibody of claim 8 wherein the antibody is monoclonal.
10. **(Withdrawn)** The antibody of claim 8 wherein the antibody is polyclonal.
11. **(Currently Amended)** An isolated polynucleotide selected from the group consisting of:
 - a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO:1 [[Figures 8A and 8B]],

b) a polynucleotide encoding a protein comprising the amino acid sequence of SEQ ID NO:2 [[Figure 9]],

c) a polynucleotide encoding a protein comprising a fragment of the amino acid sequence of SEQ ID NO:2 [[Figure 9]], wherein the fragment comprises at least 10 contiguous amino acid residues of the amino acid sequence of SEQ ID NO:2 having biological activity,

d) a polynucleotide which is an allelic variant of the polynucleotide of a), having biological activity and,

e) a polynucleotide which encodes a species homologue of the protein of b) or c), having biological activity.

12. An isolated polynucleotide of Claim 11 wherein said polynucleotide is operably linked to an expression control sequence.

13. **(Currently Amended)** A host cell transformed with a polynucleotide of Claim 1.

[[An isolated polynucleotide selected from the group consisting of:

a) a polynucleotide comprising the nucleotide sequence of SEQ ID NO:1,

b) a polynucleotide encoding a protein comprising the amino acid sequence of SEQ ID NO:2,

c) a polynucleotide encoding a protein comprising a fragment of the amino acid sequence of SEQ ID NO:2, having biological activity,

d) a polynucleotide which is an allelic variant of the polynucleotide of a) and,

e) a polynucleotide which encodes a species homologue of the protein of b) or c).]]

14. The host cell of Claim 13, wherein said cell is a mammalian cell.

15. The host cell of Claim 13, wherein the cell is a bacterial cell.

16. A process for producing a protein encoded by a polynucleotide of Claim 12, which process comprises:

- a) growing a culture of the host cell of Claim 13 in a suitable culture medium;
- and
- b) purifying said protein from the culture.

17. **(Withdrawn)** A protein produced according to the process of Claim 16.

18. **(Withdrawn)** The protein of Claim 17 comprising a mature protein.

19. **(Withdrawn)** An isolated protein, wherein the protein comprises an amino acid sequence selected from the group consisting of:

- a) the amino acid sequence of Figure 9; and
- b) fragments of the amino acid sequence of Figure 9, the protein being substantially free from other mammalian proteins.

20. **(Withdrawn)** A cell comprising mutated hlre1p.

21. **(Withdrawn)** The cell of Claim 20, wherein the cell is a mammalian cell.

22. **(Withdrawn)** The cell of Claim 20, wherein the cell is a bacterial cell.

23. **(Withdrawn)** A nucleic acid probe comprising at least a fragment of a nucleic acid molecule comprising a nucleotide sequence capable of hybridizing under stringent conditions to the nucleotide sequence of Figures 8A and 8B, wherein the probe is of a length sufficient to hybridize with a complementary nucleic acid sequence thereto.

24. **(Withdrawn)** A method of screening a sample for a nucleic acid molecule encoding Ire1p, wherein the sample comprises nucleic acid sequences, comprising the steps of:

- a) contacting the sample with the nucleic acid probe of Claim 23 wherein the nucleotides represented by "T" are selected from the group consisting of thymidine or uracil; and

b) detecting hybridization of the probe to complementary nucleic acid sequences encoding Ire1p in the sample.

25. **(Withdrawn)** A nucleic acid probe comprising at least a fragment of a nucleic acid molecule comprising a nucleotide sequence capable of hybridizing under stringent conditions to the complement of the nucleotide sequence of Figures 8A and 8B, wherein the probe is of a length sufficient to hybridize with a complementary nucleic acid sequence thereto.

26. **(Withdrawn)** A method of screening a sample for a nucleic acid molecule encoding Ire1p, wherein the sample comprises nucleic acid sequences, comprising the steps of:

a) contacting the sample with the nucleic acid probe of Claim 25 wherein the nucleotides represented by "T" are selected from the group consisting of thymidine or uracil; and

b) detecting hybridization of the probe to complementary nucleic acid sequences encoding Ire1p in the sample.

27. **(Withdrawn)** A method of increasing the survival of a cell comprising transforming the cell with the nucleotide sequence of Figures 8A and 8B.

28. **(Withdrawn)** The method of Claim 27, wherein said cell has been exposed to an anti-cancer treatment.

29. **(Withdrawn)** The method of Claim 28, wherein the anti-cancer treatment is adriamycin.

30. **(Withdrawn)** A method of increasing the sensitivity of a cell to death comprising inhibiting the expression of hlrel in said cell.